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Urinary Incontinence: Patients Health Care

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Abstract

Introduction: Urinary incontinence can be distressful and may affect the quality of life to a great extent. Common types of UI are stress incontinence, urge incontinence and mixed incontinence. UI is more prevalent in older people and more frequently diagnosed in females than males. Efforts are made to investigate the primary disorder which causes incontinence, as UI is mostly secondary to an underlying medical condition.

Methodology: This study included patients diagnosed with UI and was conducted during one year period extending from February 2013 to January 2014. The data also constituted of a self-administered questionnaire to access the patient's knowledge regarding their disease. Ethical consent was obtained from the hospital where data were collected and oral and written consents were taken from all the participants prior to their participation.

Results: The study included 332 patients with a response rate of 73.7%. Overall, 254 males and 278 females participated. 64.9% of the male participants had urge incontinence followed by 26.6% having stress incontinence, while only 8.44% of the males were diagnosed with mixed incontinence. In females 77.2% had stress incontinence followed by urge incontinence (15.1%) and only 7.3% had Mixed urinary incontinence. 24% of males and 44.3 % of females believed that pelvic exercises can prevent or treat UI. 34.6% of the total participants (40% females, 27.9% males) had an understanding that weak anatomy contributes to the development of UI.

Conclusion: Stress incontinence is more common in women, while the dominant type in men is urge continence. All patients, especially pregnant women should be provided information regarding UI in order to efficiently cope up with the condition if encountered.

Keywords: Urinary incontinence; Stress incontinence; Urge incontinence; Kegel exercises

Introduction

Urinary incontinence (UI) is an involuntary loss of urine, it is common and can negatively impact one's quality of life [1]. The most prevalent type of urinary incontinence in women is stress incontinence followed by urge incontinence [2]. Another common type is mixed incontinence, when the patient has both stress and urges incontinence simultaneously [3]. Stress incontinence occurs due to damage to urethral support which is supported by pelvic muscles and usually manifests as an uncontrolled leakage of urine during coughing, straining, laughing or any condition that increases pressure on the bladder [4]. Common causes of stress incontinence are pregnancy, childbirth and menopause [5]. Urge incontinence results from uninhibited contractions of the detrusor muscles [6]. Uncontrolled diabetes, anxiety, medications and other factors may worsen urge incontinence [7].

Bladder problems are more frequent in women than men [8]. It has been estimated that every third women aged more than 60 years has a bladder related problem or is urinary incontinent [9]. Compromised Bladder control function has been seen more frequently in obese and can cause significant mental stress and depression [10].

Like women, men tend to have incontinence or bladder problems, more at older ages. According to National Institutes of Health (NIH), more than 16 percent of men over the age of 60 years' experience bladder control problem [11]. Advancing age has strong relationship with the development of urinary incontinence, as caused by neurological injuries and physical problems such as enlarged prostate.

UI is diagnosed by a thorough history and careful physical examination to observe any clinical sign directing towards the primary condition causing incontinence [12]. Certain tests and investigations aid the diagnosis such as stress test, cystoscopy, ultrasound, urinanalysis and urodynamics [13]. The precise diagnosis of the type of UI is critical for treatment, which include multiple options varying from conservative treatment to surgery. The most frequently recommended treatment for urinary incontinence is the Kegel exercise, which strengthens the pelvic muscles [14]. Multiple medications are used but the efficacy remains limited. The definitive treatment of refractory cases is surgery, which includes slings, bladder repositioning and Marshall-Marchetti Krantz procedure [15].

Methodology

This study was conducted during the time period of one year starting from February 2013 to January 2014.The data was collected from two tertiary care hospitals located in Karachi, Pakistan. The patients presenting with urinary incontinence were included in the study. There was no gender restriction to participate in the study. Diagnosis of the type of urinary incontinence was made through clinical history, complete physical examination and required investigations in each case. The awareness regarding UI was evaluated through a self-administered questionnaire which included questions accessing the basics of UI and patients perception of the disease and outcomes. At the end of the filling of the questionnaire they were briefed about UI, its types, complications, diagnosis, treatment and other required information.

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Oral and written consent was obtained from all the participants and ethical approval was taken from the ethical board of both the hospital prior to the start of the study. The data was analyzed through Statistical Package for Social Sciences (SPSS) version [16,17].

Results

Of the total 450 patients with urinary incontinence, 350 individual consented to participate in the study, the response rate was 73.7%. This study included 254 male and 278 female participants. Maximum number of male patients was in the age group between 65-74 years (39.6%). The maximum number of female participants was in the age group 55-64 years (24.7%). Amongst the male participants with UI, 64.9% had urge incontinence followed by 26.6% of stress incontinence while 8.44 % of the male participants were diagnosed with mixed incontinence. In male patients, stress incontinence was more prevalent in the age group 55-64 years, while urge incontinence was in 65-74 years. In contrast to males, female participants demonstrated a different trend with 77.2% of females having stress incontinence followed by 15.1% of urge incontinence and only 7.3% had mixed urinary incontinence. In females, stress incontinence was more prevalent in the age group 45-54 years and urge incontinence was equally prevalent in age groups 65-74 and 75 and above (3.9% of total female patients).

In response to the question that if UI is more common in females than males, 29.2% of the male and 43% of the female participants believed that was the case. Overall, 23.4% of the study participators asserted that UI always require surgery (22.7 % male and 24.1% female). In acquiring knowledge regarding the curable nature of UI, almost half of the participants (49.6%) asserted that the UI is curable (57.9% male, 42.6% female). In total 37.3 % and 18.9% considered that Diabetes Mellitus and Hypertension respectively, can cause UI. 34.9% of the participants, with 24% of males and 44.3 % of females were convinced that pelvic exercises can prevent or treat UI.

In response to the question regarding the etiology of the stress incontinence, 40% of the females and 27.9% of the males (34.6% total participants) believed that weak anatomy contributes to the development of UI. 22.2% considered stress incontinence as autoimmune mediated while 14.4% regards it as an outcome of an infectious process. A large number of the participants (28.6%) did not know the etiological cause of UI Tables 1-4.

Discussion

Urinary incontinence is frequently encountered by general physicians, family practitioners and urologists. Both male and female patients complain regarding UI and the prevalence increases as the age advances. Different types of UI have various well established risk factors. Stress incontinence is the most frequent type in female and it is associated with the pelvic muscles weakness. Pelvic muscle often compromise during the childbirth, hence multiparity is a major risk factor for stress incontinence. In our study it is shown that 77.5% of the female participants had stress incontinence in all cases of UI. In addition to it, the most affected age group is between 45-54 years. It is the age group where the childbirth ceases and the reproductive cycle terminates. In a study by Hanskaar et al., it was noted that stress incontinence is the most prevalent type of UI in women, with 44% in France, 42 % in the UK and 41 % in Germany [2].

Age Group	Stress Incontinence	Urge incontinence	Mixed incontinence	total
35-44	1(0.64)	3(1.94)	1(0.64)	5(3.24)
45-54	6(3.89)	10(6.49)	2(1.29)	18(11.68)
55-64	18(11.68)	35 (22.72)	5(3.24)	58(37.66)
65-74	13(8.44)	44(28.57)	4(2.59)	61(39.61)
75 and Above	3(1.94)	8(5.19)	1(0.64)	12(7.79)
	41(26.62)	100(64.93)	13(8.44)	154(100)

Table 1: Urinary Incontinence In Male Participants.

Age Group	Stress Incontinence	Urge incontinence	Combined	total
35-44	27(15.16)	3(1.68)	2(1.12)	32(17.97)
45-54	38(21.34)	6(3.37)	1(0.56)	45(25.2)
55-64	35(19.66)	4(2.24)	5(2.80)	44(24.71)
65-74	29(16.29)	7(3.93)	3(1.68)	39(21.91)
75 and Above	9(5.05)	7(3.93)	2(1.12)	18(10.11)
	138(77.52)	27(15.1)	13(7.30)	178(100)

Table 2: Urinary Incontinence In Female Participants.

QUESTIONS	MALES	FEMALES	TOTAL	P-VALUE
U.I is More common in females	45(29.22)	78(43.8)	123(37.0)	1.32
Always require surgery	35(22.72)	43(24.1)	78(23.4)	7.18
UI Is curable	89(57.79)	76(42.6)	165(49.6)	0.02
DM can cause U.I	56(36.36)	68(38.2)	124(37.3)	8.84
HTN can cause U.I	34(22.07	29(16.2)	63(18.9)	3.38
Can be prevented or treated by pelvic exercises	37(24.02)	79(44.3)	116(34.9)	0.03

Table 3: Knowledge Regarding Urinary Incontinence In Patients With U.i.

ETIOLOGIES	MALES	FEMALES	TOTAL	P-VALUE
Infectious	29(18.8)	19(5.0)	48(14.4)	1.08
autoimmune	32(20.7)	42(23.5)	74(22.2)	9.86
Weak anatomy	43(27.9)	72(40.4)	115(34.6)	0.03
Don't know	50(32.4)	45(25.2)	95(28.6)	2.56

Table 4: Etiology Of Stress Incontinence.

In another study conducted in Japan showed that the most prevalent type of UI is stress incontinence, occurring in 33.9% of the Japanese women and the age group most affected was between 40-49 years. Therefore it is observed that the stress incontinence is highly prevalent in women after 40 years of age [16].

Results of this study demonstrate that urge incontinence is the most prevailing type of UI in men with the age group of 65-74 years having maximum number of cases. Ueda et al showed that urge incontinence is the commonest type UI in men. In comparison to our finding it was observed that the most affected age group of men was 70 years and above. A reason for high prevalence of Urge incontinence in older age group could be due to increase in chronic diseases which tend to initiate or worsen urge incontinence, such as Diabetes Mellitus. In a study by Lifford et al., it was delineated that incidence of DM-2 increases with age and the prevalence of urge incontinence is significantly associated with it, and the longer the patient had DM-2 the more the association [7].

In this study it was observed that 44.3% of the female participant knew that the pelvic exercises are related to decrease incidence of UI, however a lesser number of male participants were aware of this fact. Results of a study by Chiarelli et al. showed that the majority of the women had correct understanding of the pelvic floor exercises, their duration and the required frequency [17]. The greater level of awareness of females than male regarding pelvic exercise could be due to the fact that they may be educated during their pregnancies and post-partum. Another factor which may lead to greater understanding of the issue is that UI is more prevalent in women than men, so women

impel more towards learning the etiology, prevention and treatment of their disease.

Our results demonstrated that the almost half of the participant believed that UI is a curable condition. A Brazilian study showed that the majority of the participants (66%) considers UI as a treatable condition [18]. Another study demonstrated that 38% of the participants thought that UI is treatable and completely curable. Low level of awareness regarding the cure of UI in many countries may be due to lack of proper health education provided by the health care personals and ineffective health promotion policies at the government level.

Conclusion

The patients should be provided with proper education regarding UI at every outpatient hospital visit to fill the gaps in essential knowledge required for this health concern. Health promotion regarding pelvic exercise particularly to the pregnant should be made at every level.

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